

AMENDMENT TO THE COMMITTEE PRINT
OFFERED BY MR. WYNN OF MARYLAND

In title VI, amend subtitle C to read as follows:

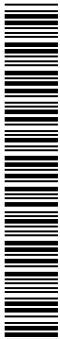
1 **Subtitle C—Additional Hydrogen**
2 **Production Provisions**

3 **SEC. 651. HYDROGEN PRODUCTION PROGRAMS.**

4 (a) ADVANCED REACTOR HYDROGEN COGENERA-
5 TION PROJECT.—

6 (1) PROJECT ESTABLISHMENT.— The Sec-
7 retary is directed to establish an Advanced Reactor
8 Hydrogen Cogeneration Project.

9 (2) PROJECT DEFINITION.— The project shall
10 consist of the research, development, design, con-
11 struction, and operation of a hydrogen production
12 cogeneration research facility that, relative to the
13 current commercial reactors, enhances safety fea-
14 tures, reduces waste production, enhances thermal
15 efficiencies, increases proliferation resistance, and
16 has the potential for improved economics and phys-
17 ical security in reactor siting. This facility shall be
18 constructed so as to enable research and develop-
19 ment on advanced reactors of the type selected and



1 on alternative approaches for reactor-based produc-
2 tion of hydrogen.

3 (3) PROJECT MANAGEMENT.—

4 (A) MANAGEMENT.—The project shall be
5 managed within the Department by the Office
6 of Nuclear Energy, Science, and Technology.

7 (B) LEAD LABORATORY.—The lead labora-
8 tory for the project, providing the site for the
9 reactor construction, shall be the Idaho Na-
10 tional Laboratory (in this subsection referred to
11 as “INL”).

12 (C) STEERING COMMITTEE.—The Sec-
13 retary shall establish a national steering com-
14 mittee with membership from the national lab-
15 oratories, universities, and industry to provide
16 advice to the Secretary and the Director of the
17 Office of Nuclear Energy, Science, and Tech-
18 nology on technical and program management
19 aspects of the project.

20 (D) COLLABORATION.—Project activities
21 shall be conducted at INL, other national lab-
22 oratories, universities, domestic industry, and
23 international partners.

24 (4) PROJECT REQUIREMENTS.—

25 (A) RESEARCH AND DEVELOPMENT.—



1 (i) IN GENERAL.—The project shall
2 include planning, research and develop-
3 ment, design, and construction of an ad-
4 vanced, next-generation, nuclear energy
5 system suitable for enabling further re-
6 search and development on advanced reac-
7 tor technologies and alternative approaches
8 for reactor-based generation of hydrogen.

9 (ii) REACTOR TEST CAPABILITIES AT
10 INL.—The project shall utilize, where ap-
11 propriate, extensive reactor test capabilities
12 resident at INL.

13 (iii) ALTERNATIVES.—The project
14 shall be designed to explore technical, envi-
15 ronmental, and economic feasibility of al-
16 ternative approaches for reactor-based hy-
17 drogen production.

18 (iv) INDUSTRIAL LEAD.—The indus-
19 trial lead for the project shall be a com-
20 pany incorporated in the United States.

21 (B) INTERNATIONAL COLLABORATION.—

22 (i) IN GENERAL.—The Secretary shall
23 seek international cooperation, participa-
24 tion, and financial contribution in this
25 project.



1 (ii) ASSISTANCE FROM INTER-
2 NATIONAL PARTNERS.—The Secretary may
3 contract for assistance from specialists or
4 facilities from member countries of the
5 Generation IV International Forum, the
6 Russian Federation, or other international
7 partners where such specialists or facilities
8 provide access to cost-effective and relevant
9 skills or test capabilities.

10 (iii) GENERATION IV INTERNATIONAL
11 FORUM.—International activities shall be
12 coordinated with the Generation IV Inter-
13 national Forum.

14 (iv) GENERATION IV NUCLEAR EN-
15 ERGY SYSTEMS PROGRAM.—The Secretary
16 may combine this project with the Genera-
17 tion IV Nuclear Energy Systems Program.

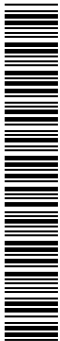
18 (C) DEMONSTRATION.—The overall
19 project, which may involve demonstration of se-
20 lected project objectives in a partner nation,
21 must demonstrate both electricity and hydrogen
22 production and may provide flexibility, where
23 technically and economically feasible in the de-
24 sign and construction, to enable tests of alter-
25 native reactor core and cooling configurations.



1 (D) PARTNERSHIPS.—The Secretary shall
2 establish cost-shared partnerships with domestic
3 industry or international participants for the re-
4 search, development, design, construction, and
5 operation of the research facility, and pref-
6 erence in determining the final project structure
7 shall be given to an overall project which re-
8 tains United States leadership while maximizing
9 cost sharing opportunities and minimizing Fed-
10 eral funding responsibilities.

11 (E) TARGET DATE.—The Secretary shall
12 select technologies and develop the project to
13 provide initial testing of either hydrogen pro-
14 duction or electricity generation by 2011, or
15 provide a report to Congress explaining why
16 this date is not feasible.

17 (F) WAIVER OF CONSTRUCTION
18 TIMELINES.—The Secretary is authorized to
19 conduct the Advanced Reactor Hydrogen Co-
20 generation Project without the constraints of
21 DOE Order 413.3, relating to program and
22 project management for the acquisition of cap-
23 ital assets, as necessary to meet the specified
24 operational date.

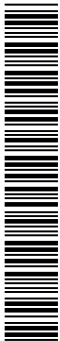


1 (G) COMPETITION.—The Secretary may
2 fund up to 2 teams for up to 1 year to develop
3 detailed proposals for competitive evaluation
4 and selection of a single proposal and concept
5 for further progress. The Secretary shall define
6 the format of the competitive evaluation of pro-
7 posals.

8 (H) USE OF FACILITIES.—Research facili-
9 ties in industry, national laboratories, or univer-
10 sities either within the United States or with
11 cooperating international partners may be used
12 to develop the enabling technologies for the re-
13 search facility. Utilization of domestic univer-
14 sity-based facilities shall be encouraged to pro-
15 vide educational opportunities for student devel-
16 opment.

17 (I) ROLE OF NUCLEAR REGULATORY COM-
18 MISSION.—

19 (i) IN GENERAL.—The Nuclear Regu-
20 latory Commission shall have licensing and
21 regulatory authority for any reactor au-
22 thorized under this subsection, pursuant to
23 section 202 of the Energy Reorganization
24 Act of 1974 (42 U.S.C. 5842).



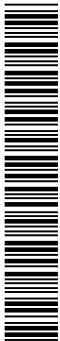
1 (ii) RISK-BASED CRITERIA.—The Sec-
2 retary shall seek active participation of the
3 Nuclear Regulatory Commission through-
4 out the project to develop risk-based cri-
5 teria for any future commercial develop-
6 ment of a similar reactor architecture.

7 (J) REPORT.—The Secretary shall develop
8 and transmit to Congress a comprehensive
9 project plan not later than 3 months after the
10 date of enactment of this Act. The project plan
11 shall be updated annually with each annual
12 budget submission.

13 (b) ADVANCED NUCLEAR REACTOR TECH-
14 NOLOGIES.—The Secretary shall—

15 (1) prepare a detailed roadmap for carrying out
16 the provisions in this subtitle related to advanced
17 nuclear reactor technologies and for implementing
18 the recommendations related to advanced nuclear re-
19 actor technologies that are included in the report
20 transmitted under subsection (d); and

21 (2) provide for the establishment of 5 projects
22 in geographic areas that are regionally and climati-
23 cally diverse to demonstrate the commercial produc-
24 tion of hydrogen at existing nuclear power plants,
25 including one demonstration project at a national



1 laboratory or institution of higher education using
2 an advanced gas-cooled reactor.

3 (c) COLLOCATION WITH HYDROGEN PRODUCTION
4 FACILITY.—Section 103 of the Atomic Energy Act of
5 1954 (42 U.S.C. 2011) is amended by adding at the end
6 the following new subsection:

7 “g. The Commission shall give priority to the licens-
8 ing of a utilization facility that is collocated with a hydro-
9 gen production facility. The Commission shall issue a final
10 decision approving or disapproving the issuance of a li-
11 cense to construct and operate a utilization facility not
12 later than the expiration of 3 years after the date of the
13 submission of such application, if the application ref-
14 erences a Commission-certified design and an early site
15 permit, unless the Commission determines that the appli-
16 cant has proposed material and substantial changes to the
17 design or the site design parameters.”.

18 (d) REPORT.—The Secretary shall transmit to the
19 Congress not later than 120 days after the date of enact-
20 ment of this Act a report containing detailed summaries
21 of the roadmaps prepared under subsection (b)(1), de-
22 scriptions of the Secretary’s progress in establishing the
23 projects and other programs required under this section,
24 and recommendations for promoting the availability of ad-



1 vanced nuclear reactor energy technologies for the produc-
2 tion of hydrogen.

3 (e) AUTHORIZATION OF APPROPRIATIONS.—For the
4 purpose of supporting research programs related to the
5 development of advanced nuclear reactor technologies
6 under this section, there are authorized to be appropriated
7 to the Secretary—

8 (1) \$65,000,000 for fiscal year 2006;

9 (2) \$74,750,000 for fiscal year 2007;

10 (3) \$85,962,500 for fiscal year 2008;

11 (4) \$98,856,875 for fiscal year 2009;

12 (5) \$113,685,406 for fiscal year 2010;

13 (6) \$130,738,217 for fiscal year 2011;

14 (7) \$150,348,950 for fiscal year 2012;

15 (8) \$172,901,292 for fiscal year 2013;

16 (9) \$198,836,486 for fiscal year 2014; and

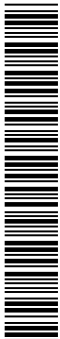
17 (10) \$228,661,959 for fiscal year 2015.

18 **SEC. 652. DEFINITIONS.**

19 For purposes of this subtitle—

20 (1) the term “advanced nuclear reactor tech-
21 nologies” means—

22 (A) technologies related to advanced light
23 water reactors that may be commercially avail-
24 able in the near-term, including mid-sized reac-
25 tors with passive safety features, for the gen-



1 eration of electric power from nuclear fission
2 and the production of hydrogen; and

3 (B) technologies related to other nuclear
4 reactors that may require prototype demonstra-
5 tion prior to availability in the mid-term or
6 long-term, including high-temperature, gas-
7 cooled reactors and liquid metal reactors, for
8 the generation of electric power from nuclear
9 fission and the production of hydrogen;

10 (2) the term “institution of higher education”
11 has the meaning given to that term in section
12 101(a) of the Higher Education Act of 1965 (20
13 U.S.C. 1001(a)); and

14 (3) the term “Secretary” means the Secretary
15 of Energy.

